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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,958	11/19/2001	Naoki Oguchi	FUJZ 19.185	9665

26304 7590 10/18/2006

KATTEN MUCHIN ROSENMAN LLP  
575 MADISON AVENUE  
NEW YORK, NY 10022-2585

EXAMINER
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LEE, ANDREW CHUNG CHEUNG

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/988,958

Applicant(s)

OGUCHI ET AL.

Examiner

Andrew C. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 5, 9, 11 are rejected under 35 U.S.C. 102(e) as being anticipated by McCanne (US 6611872 B1).

Regarding claims 1, 5, 9, McCanne discloses the limitation of a virtual network construction method, system, apparatus for a public data communication network ("overlay network" as virtual network, "Internet" as public data communication network; column 2, lines 40 – 49) comprising the steps of: generating and multicasting control packets each having set a multicast address predetermined per virtual network in first relaying apparatuses originating a virtual network within the public data communication network ("utilizes a two-level addressing strategy, where overlay addresses are carried in additional overlay header, and native multicast addresses ..." as generating and multicasting control packets each having set a multicast address predetermined per virtual network in first relaying apparatuses column 4, lines 54 – 62; column 6, lines 14 – 16, lines 19 – 26; lines 37 – 51), and ; establishing virtual links to the first relaying apparatuses which are transmitting sources of the control packets upon receipt thereof

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and returning reply packets through the virtual links in second relaying apparatuses belonging to the multicast address group represented by the multicast address (column 7, lines 42 – 53), whereby the virtual links are established between all pairs of the first and the second relaying apparatuses belonging to a multicast address group to construct the virtual network (“overlay routers may overlay addresses onto native group address using a well-defined hash function and the peers that are interested in receiving a certain overlay group” as virtual links are established between all pairs of the first and the second relaying apparatuses belonging to a multicast address group; column 12, lines 53 – 59) that is preliminary associated with a virtual relaying structure, which is independently operable per virtual network, provided in the first and the second relaying apparatuses mutually connected by the public data communication network (“the multicast address ranges for the overlay scopes that define two TVIF’s are disjoint” implies first and second relay apparatuses, independently operable, and “C can efficiently forward traffic between the two region” as mutually connected by the public data communication network; column 13, lines 24 – 34).

Regarding claim 11, McCanne discloses the limitation of the relaying apparatus as claimed in claimed further comprising means for generating a routing table for each of a plurality of virtual networks logically independent of one another (“database of state” as means for generating a routing table for each of a plurality of virtual networks; column 6, lines 37 – 51), and means for performing a packet relay of each virtual network based on the routing table (column 6, lines 40 – 51; column 17, lines 30 – 43; column 18, lines 24 – 27).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 6, 10, 3, 7, 12, 4, 8, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCanne (US 6611872 B1) in view of Ylonen et al. (US 6438612 B1).

Regarding claims 2, 6, 10, McCanne discloses the limitation of a virtual network construction method, system, apparatus comprising the steps of generating and multicasting control packets each having set a multicast address predetermined per virtual network in first relaying apparatuses originating a virtual network within a public data communication network (overlay network" as virtual network, "Internet" as public data communication network; column 2, lines 40 – 49). McCanne does not disclose expressly the virtual network construction method, system, apparatus as claimed in claimed wherein the second relaying apparatuses authenticate the control packets received. Ylonen et al. disclose the limitation of the virtual network construction method, system, apparatus as claimed in claimed wherein the second relaying apparatuses authenticate the control packets received (Abstract, lines 12 – 19; column 7, lines 65 – 67; column 8, lines 1 – 9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McCanne to include the virtual network

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construction method, system, apparatus as claimed in claimed wherein the second relaying apparatuses authenticate the control packets received such as that taught by Ylonen et al. in order to provide secure transmission of data packets in a network comprising so-called virtual routers (as suggested by Ylonen et al., see column 1, lines 8 – 10).

Regarding claims 3, 7, 12, McCanne discloses the limitation of a virtual network construction method, system, apparatus comprising the steps of generating and multicasting control packets each having set a multicast address predetermined per virtual network in first relaying apparatuses originating a virtual network within a public data communication network (overlay network” as virtual network, “Internet” as public data communication network; column 2, lines 40 – 49). McCanne does not disclose expressly the virtual network construction method, system, apparatus as claimed in claimed wherein the virtual links comprise IP tunnels. Ylonen et al. discloses the limitation of the virtual network construction method, system, apparatus as claimed in claimed wherein the virtual links comprise IP tunnels (column 2, lines 17 – 23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McCanne to include the virtual network construction method, system, apparatus as claimed in claimed wherein the virtual links comprise IP tunnels such as that taught by Ylonen et al. in order to provide secure transmission of data packets in a network comprising so-called virtual routers (as suggested by Ylonen et al., see column 1, lines 8 – 10).

Regarding claims 4, 8, 13, McCanne discloses the limitation of a virtual network construction method, system, apparatus comprising the steps of generating and multicasting control packets each having set a multicast address predetermined per virtual network in first relaying apparatuses originating a virtual network within a public data communication network (overlay network" as virtual network, "Internet" as public data communication network; column 2, lines 40 – 49). McCanne discloses the limitation of the virtual network construction method, system, apparatus as claimed in claimed wherein the virtual links comprise MPLS tunnels. Ylonen et al. discloses the limitation of the virtual network construction method, system, apparatus as claimed in claimed wherein the virtual links comprise MPLS tunnels (column 2, lines 53 – 59). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McCanne to include the virtual network construction method, system, apparatus as claimed in claimed wherein the virtual links comprise MPLS tunnels such as that taught by Ylonen et al. in order to provide secure transmission of data packets in a network comprising so-called virtual routers (as suggested by Ylonen et al., see column 1, lines 8 – 10).

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Morgenstern et al. (US Patent No. 6587467 B1) disclose VC multicast implementation scheme utilizing VP tunneling over public ATM VP switched networks

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utilizing P2P and P2M connections to provide VC multicast capability to the attached private ATM networks.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ACL

Oct 10, 2006



## DETAILED ACTION

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***Claim Rejections - 35 USC § 103***

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Regarding claims 3, 7, 12, McCanne discloses the limitation of a virtual network construction method, system, apparatus comprising the steps of generating and multicasting control packets each having set a multicast address predetermined per virtual network in first relaying apparatuses originating a virtual network within a public data communication network (overlay network" as virtual network, "Internet" as public data communication network; column 2, lines 40 – 49). McCanne does not disclose expressly the virtual network construction method, system, apparatus as claimed in claimed wherein the virtual links comprise IP tunnels. Ylonen et al. discloses the limitation of the virtual network construction method, system, apparatus as claimed in claimed wherein the virtual links comprise IP tunnels (column 2, lines 17 – 23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McCanne to include the virtual network construction method, system, apparatus as claimed in claimed wherein the virtual links comprise IP tunnels such as that taught by Ylonen et al. in order to provide secure transmission of data packets in a network comprising so-called virtual routers (as suggested by Ylonen et al., see column 1, lines 8 – 10).

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### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Morgenstern et al. (US Patent No. 6587467 B1) disclose VC multicast implementation scheme utilizing VP tunneling over public ATM VP switched

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networks utilizing P2P and P2M connections to provide VC multicast capability to the attached private ATM networks.

- Delancey et al. (US Patent No. 6937574 B1) disclose methods and apparatus for routing packets through a communications network, a respective distinct broadcast address is assigned to each of a plurality of distinct sets of virtual ports. No virtual port belongs to more than one of the distinct sets.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

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ACL

Oct 10, 2006

  
RICKY Q. NGO  
SUPERVISORY PATENT EXAMINER